- 2. The pesticidal composition of claim 1, wherein the composition is effective against mites, aphids, thrips, whiteflies, loopers, worms, beetles, leaftollers, moths, weevils, or eggs thereof.
- 3. A method for controlling agricultural invertebrate pests, including insects, arachnids, or larvae and eggs thereof, comprising applying to a locus where control is desired a pesticidally-effective amount of the composition of claim 1.
- 4. The method of claim 3, wherein the invertebrate pest is selected from the group consisting of mites, aphids, thrips, whiteflies, loopers, worms, beetles, leafrollers, moths, weevils, and eggs thereof.
- 5. A pesticidal composition comprising, in admixture with an acceptable carrier, wintergreen oil and optionally, a diluent selected from the group consisting of rosemary oil, mineral oil, benzyl alcohol, citronellal, d-limonene, safflower oil, soybean oil, and sesame oil, wherein the composition is pesticidally effective against fungus, bacteria, insects, arachnids, or larvae and eggs thereof.
- 6. The pesticidal composition of claim 5, wherein the composition is effective against mites, aphids, thrips, whiteflies, loopers, worms, beetles, leafrollers, moths, weevils, or eggs thereof.
- 10. A method for controlling agricultural invertebrate pests, including insects, arachnids, or larvae and eggs thereof, comprising applying to a locus where control is desired a pesticidally-effective amount of the composition of claim 5.
- 11. The method of claim 10, wherein the invertebrate pest is selected from the group consisting of mites, aphids, thrips, whiteflies, loopers, worms, beetles, leafrollers, moths, weevils, and eggs thereof.
- 12. A pesticidal composition comprising, in admixture with an acceptable carrier, rosemary oil, wintergreen oil and optionally, a diluent selected from the group consisting of mineral oil, benzyl alcohol, citronellal, d-limonene, safflower oil, soybean oil, and sesame oil, wherein the composition is pesticidally effective against fungus, bacteria, insects, arachnids, or larvae and eggs thereof.
- 13. The pesticidal composition of claim 12, wherein the composition is effective against mites, aphids, thrips, whiteflies, loopers, worms, beetles, leafrollers, moths, weevils, or eggs thereof.



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- 16. The composition of claim 12, wherein wintergreen oil and rosemary oil are present in the percent ratio of 80% to 20%, respectively.
- 18. A method for controlling agricultural invertebrate pests, including insects, arachnids, or larvae and eggs thereof, comprising applying to a locus where control is desired a pesticidally-effective amount of the composition of claim 12.
- 19. The method of claim 18, wherein the invertebrate pest is selected from the group consisting of mites, aphids, thrips, whiteflies, loopers, worms, beetles, leafrollers, moths, weevils, and eggs thereof.
- 20. A pesticidal composition comprising, in admixture with an acceptable carrier, rosemary oil, wintergreen oil, mineral oil and optionally, a diluent selected from the group consisting of mineral oil, benzyl alcohol, citronellal, d-limonene, safflower oil, soybean oil, and sesame oil, wherein the composition is pesticidally effective against fungus, bacteria, insects, arachnids, or larvae and eggs thereof.
- 21. The pesticidal composition of claim 20, wherein the composition is effective against mites, aphids, thrips, whiteflies, loopers, worms, beetles, leafrollers, moths, weevils, or eggs thereof.
- 23. A method for controlling agricultural invertebrate pests, including insects, arachnids, or larvae and eggs thereof, comprising applying to a locus where control is desired a pesticidally-effective amount of the composition of claim 20.
- 24. The method of claim 23, wherein the invertebrate pest is selected from the group consisting of mites, aphids, thrips, whiteflies, loopers, worms, beetles, leafrollers, moths, weevils, and eggs thereof.
- 25. A pesticidal composition comprising, in admixture with an acceptable carrier, wintergreen oil, mineral oil and phenylethyl propionate, wherein the composition is pesticidally effective against fungus, bacteria, insects, arachnids, or larvae and eggs thereof.
- 26. The pesticidal composition of claim 25, wherein the composition is effective against mites, aphids, thrips, whiteflies, loopers, worms, beetles, leafrollers, moths, weevils, or eggs thereof.
- 28. A method for controlling agricultural invertebrate pests, including insects, arachnids, or larvae and eggs thereof, comprising applying to a locus where control is desired a pesticidally-effective amount of the composition of claim 25.

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- 29. The method of claim 28, wherein the invertebrate pest is selected from the group consisting of mites, aphids, thrips, whiteflies, loopers, worms, beetles, leafrollers, moths, weevils, and eggs thereof.
- 30. A pesticidal composition comprising, in admixture with an acceptable carrier, wintergreen oil, mineral oil and cinnamon oil, wherein the composition is pesticidally effective against fungus, bacteria, insects, arachnids, or larvae and eggs thereof.
- 31. The pesticidal composition of claim 30, wherein the composition is effective against mites, aphids, thrips, whiteflies, loopers, worms, beetles, leafrollers, moths, weevils, or eggs thereof.
- 33. A method for controlling agricultural invertebrate pests, including insects, arachnids, or larvae and eggs thereof, comprising applying to a locus where control is desired a pesticidally-effective amount of the composition of claim 30.
- 34. The method of claim 33, wherein the invertebrate pest is selected from the group consisting of mites, aphids, thrips, whiteflies, loopers, worms, beetles, leafrollers, moths, we will, and eggs thereof.
- 35. A pesticidal composition comprising, in admixture with an acceptable carrier, wintergreen oil, phenylethyl propionate and castor oil, wherein the composition is pesticidally effective against fungus, bacteria, insects, arachnids, or larvae and eggs thereof.
- 36. The pesticidal composition of claim 35, wherein the composition is effective against mites, aphids, thrips, whiteflies, loopers, worms, beetles, leafrollers, moths, weevils, or eggs thereof.
- 38. A method for controlling agricultural invertebrate pests, including insects, arachnids, or larvae and eggs thereof, comprising applying to a locus where control is desired a pesticidally-effective amount of the composition of claim 35.
- 39. The method of claim 38, wherein the invertebrate pest is selected from the group consisting of mites, aphids, thrips, whiteflies, loopers, worms, beetles, leafrollers, moths, weevils, and eggs thereof.
- 40. A pesticidal composition comprising, in admixture with an acceptable carrier, rosemary oil, wintergreen oil, mineral oil and phenylethyl propionate, wherein the composition is pesticidally effective against fungus, bacteria, insects, arachnids, or larvae and eggs thereof.

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- The pesticidal composition of claim 40, wherein the composition is effective against mites, aphids, thrips, whiteflies, loopers, worms, beetles, leafrollers, moths, weevils, or eggs thereof.
- 43. The pesticidal composition of claim 40, wherein rosemary oil, wintergreen oil, mineral oil and phenylethyl propionate are present in the percent ratio of 5% to 60% to 20% to 15%, respectively.
- 44. A method for controlling agricultural invertebrate pests, including insects, arachnids, or larvae and eggs thereof, comprising applying to a locus where control is desired a pesticidally-effective amount of the composition of claim 40.
- 45. The method of claim 44, wherein the invertebrate pest is selected from the group consisting of mites, aphids, thrips, whiteflies, loopers, worms, beetles, leafrollers, moths, weevils, and eggs thereof.

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- 46. A pesticidal composition comprising, in admixture with an acceptable carrier, wintergreen oil, mineral oil, phenylethyl propionate and sesame oil, wherein the composition is pesticidally effective against fungus, bacteria, insects, arachnids, or larvae and eggs thereof.
- 47. The pesticidal composition of claim 46, wherein the composition is effective against mites, aphids, thrips, whiteflies, loopers, worms, beetles, leafrollers, moths, weevils, or eggs thereof.
- 49. A method for controlling agricultural invertebrate pests, including insects, arachnids, or larvae and eggs thereof, comprising applying to a locus where control is desired a pesticidally-effective amount of the composition of claim 46.
- 50. The method of claim 49, wherein the invertebrate pest is selected from the group consisting of mites, aphids, thrips, whiteflies, loopers, worms, beetles, leafrollers, moths, weevils, and eggs thereof.
- 51. A pesticidal composition comprising, in admixture with an acceptable carrier, rosemary oil, wintergreen oil, mineral oil, phenylethyl propionate and soybean oil, wherein the composition is pesticidally effective against fungus, bacteria, insects, arachnids, or larvae and eggs thereof.
- 52. The pesticidal composition of claim 51, wherein the composition is effective against mites, aphids, thrips, whiteflies, loopers, worms, beetles, leafrollers, moths, weevils, or eggs thereof.

- 55. The pesticidal composition of claim 51, wherein rosemary oil, wintergreen oil, mineral oil, phenylethyl propionate and soybean oil are present in the percent ratio of 5% to 65% to 10% to 15% to 5%, respectively.
- 56. A method for controlling agricultural invertebrate pests, including insects, arachnids, or larvae and eggs thereof, comprising applying to a locus where control is desired a pesticidally-effective amount of the composition of claim 51.
- 57. The method of claim 56, wherein the invertebrate pest is selected from the group consisting of mites, aphids, thrips, whiteflies, loopers, worms, beetles, leafrollers, moths, weevils, and eggs thereof.
- 58. A pesticidal composition comprising, in admixture with an acceptable carrier, wintergreen oil, phenylethyl propionate, soybean oil, sesame oil and safflower oil, wherein the composition is pesticidally effective against fungus, bacteria, insects, arachnids, or larvae and eggs thereof.
- 59. The pesticidal composition of claim 58, wherein the composition is effective against mites, aphids, thrips, whiteflies, loopers, worms, beetles, leafrollers, moths, weevils, or eggs thereof.
- 61. A method for controlling agricultural invertebrate pests, including insects, arachnids, or larvae and eggs thereof, comprising applying to a locus where control is desired a pesticidally-effective amount of the composition of claim 58.
- 62. The method of claim 61, wherein the invertebrate pest is selected from the group consisting of mites, aphids, thrips, whiteflies, loopers, worms, beetles, leafrollers, moths, weevils, and eggs thereof.
- 63. A pesticidal composition comprising, in admixture with an acceptable carrier, wintergreen oil, phenylethyl propionate, soybean oil, eugenol and safflower oil, wherein the composition is pesticidally effective against fungus, bacteria, insects, arachnids, or larvae and eggs thereof.
- 64. The pesticidal composition of claim 63, wherein the composition is effective against mites, aphids, thrips, whiteflies, loopers, worms, beetles, leafrollers, moths, weevils, or eggs thereof.

- 66. A method for controlling agricultural invertebrate pests, including insects, arachnids, or larvae and eggs thereof, comprising applying to a locus where control is desired a pesticidally-effective amount of the composition of claim 63.
- 67. The method of claim 66, wherein the invertebrate pest is selected from the group consisting of mites, aphids, thrips, whiteflies, loopers, worms, beetles, leafrollers, moths, weevils, and eggs thereof.
- 68. A pesticidal composition comprising, in admixture with an acceptable carrier, wintergreen oil, soybean oil, sesame oil, eugenol and safflower oil, wherein the composition is pesticidally effective against fungus, bacteria, insects, arachnids, or larvae and eggs thereof.
- 69. The pesticidal composition of claim 68, wherein the composition is effective against mites, aphids, thrips, whiteflies, loopers, worms, beetles, leafrollers, moths, weevils, or eggs thereof.
- 71. A method for controlling agricultural invertebrate pests, including insects, arachnids, or larvae and eggs thereof, comprising applying to a locus where control is desired a pesticidally-effective amount of the composition of claim 68.
- 72. The method of claim 71, wherein the invertebrate pest is selected from the group consisting of mites, aphids, thrips, whiteflies, loopers, worms, beetles, leafrollers, moths, weevils, and eggs thereof.
- 73. A pesticidal composition comprising, in admixture with an acceptable carrier, wintergreen oil, phenylethyl propionate, eugenol and safflower oil, wherein the composition is pesticidally effective against fungus, bacteria, insects, arachnids, or larvae and eggs thereof.
- 74. The pesticidal composition of claim 73, wherein the composition is effective against mites, aphids, thrips, whiteflies, loopers, worms, beetles, leafrollers, moths, weevils, or eggs thereof.
- 76. A method for controlling agricultural invertebrate pests, including insects, arachnids, or larvae and eggs thereof, comprising applying to a locus where control is desired a pesticidally-effective amount of the composition of claim 73.
- 77. The method of claim 76, wherein the invertebrate pest is selected from the group consisting of mites, aphids, thrips, whiteflies, loopers, worms, beetles, leafrollers, moths, weevils, and eggs thereof.

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- 78. A pesticidal composition comprising, in admixture with an acceptable carrier, rosemary oil, wintergreen oil, mineral oil, phenylethyl propionate and safflower oil, wherein the composition is pesticidally effective against fungus, bacteria, insects, arachnids, or larvae and eggs thereof.
- 79. The pesticidal composition of claim 78, wherein the composition is effective against mites, aphids, thrips, whiteflies, loopers, worms, beetles, leafrollers, moths, weevils, or eggs thereof.
- 81. A method for controlling agricultural invertebrate pests, including insects, arachnids, or larvae and eggs thereof, comprising applying to a locus where control is desired a pesticidally-effective amount of the composition of claim 78.
- 82. The method of claim 81, wherein the invertebrate pest is selected from the group consisting of mites, aphids, thrips, whiteflies, loopers, worms, beetles, leafrollers, moths, weevils, or eggs thereof.
- 83. A pesticidal composition comprising, in admixture with an acceptable carrier, wintergreen oil, mineral oil, phenylethyl propionate and safflower oil, wherein the composition is pesticidally effective against fungus, bacteria, insects, arachnids, or larvae and eggs thereof.
- 84. The pesticidal composition of claim 83, wherein the composition is effective against mites, aphids, thrips, whiteflies, loopers, worms, beetles, leafrollers, moths, weevils, or eggs thereof.
- 86. A method for controlling agricultural invertebrate pests, including insects, arachnids, or larvae and eggs thereof, comprising applying to a locus where control is desired a pesticidally-effective amount of the composition of claim 83.
- 87. The method of claim 86, wherein the invertebrate pest is selected from the group consisting of mites, aphids, thrips, whiteflies, loopers, worms, beetles, leafrollers, moths, weevils, and eggs thereof.
- 88. A pesticidal composition comprising, in admixture with an acceptable carrier, wintergreen oil, mineral oil, eugenol and safflower oil, wherein the composition is pesticidally effective against fungus, bacteria, insects, arachnids, or larvae and eggs thereof.
- 89. The pesticidal composition of claim 88, wherein the composition is effective against mites, aphids, thrips, whiteflies, loopers, worms, beetles, leafrollers, moths, weevils, or eggs thereof.

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- 91. A method for controlling agricultural invertebrate pests, including insects, arachnids, or larvae and eggs thereof, comprising applying to a locus where control is desired a pesticidally-effective amount of the composition of claim 88.
- 92. The method of claim 91, wherein the invertebrate pest is selected from the group consisting of mites, aphids, thrips, whiteflies, loopers, worms, beetles, leafrollers, moths, weevils, and eggs thereof.
- 93. A pesticidal composition comprising, in admixture with an acceptable carrier, rosemary oil, wintergreen oil, mineral oil, safflower oil and thyme oil, wherein the composition is pesticidally effective against fungus, bacteria, insects, arachnids, or larvae and eggs thereof.
- 94. The pesticidal composition of claim 93, wherein the composition is effective against mites, aphids, thrips, whiteflies, loopers, worms, beetles, leafrollers, moths, weevils, or eggs thereof.
- 96. A method for controlling agricultural invertebrate pests, including insects, arachnids, or larvae and eggs thereof, comprising applying to a locus where control is desired a pesticidally-effective amount of the composition of claim 93.
- 97. The method of claim 96, wherein the invertebrate pest is selected from the group consisting of mites, aphids, thrips, whiteflies, loopers, worms, beetles, leafrollers, moths, weevils, or eggs thereof.
- 98. A pesticidal composition comprising, in admixture with an acceptable carrier, rosemary oil, wintergreen oil, mineral oil, phenylethyl propionate, soybean oil and safflower oil, wherein the composition is pesticidally effective against fungus, bacteria, insects, arachnids, or larvae and eggs thereof.
- 99. The pesticidal composition of claim 98, wherein the composition is effective against mites, aphids, thrips, whiteflies, loopers, worms, beetles, leafrollers, moths, weevils, or eggs thereof.
- 101. A method for controlling agricultural invertebrate pests, including insects, arachnids, or larvae and eggs thereof, comprising applying to a locus where control is desired a pesticidally-effective amount of the composition of claim 98.
- 102. The method of claim 98, wherein the invertebrate pest is selected from the group consisting of mites, aphids, thrips, whiteflies, loopers, worms, beetles, leafrollers, moths, weevils, and eggs thereof.

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- 103. A pesticidal composition comprising, in admixture with an acceptable carrier, wintergreen oil and castor oil, wherein the composition is pesticidally effective against fungus, bacteria, insects, arachnids, or larvae and eggs thereof.
- 104. The pesticidal composition of claim 103, wherein the composition is effective against mites, aphids, thrips, whiteflies, loopers, worms, beetles, leafrollers, moths, weevils, or eggs thereof.
- 105. A method for controlling agricultural invertebrate pests, including insects, arachnids, or larvae and eggs thereof, comprising applying to a locus where control is desired a pesticidally-effective amount of the composition of claim 103.
- 106. The method of claim 105, wherein the invertebrate pest is selected from the group consisting of mites, aphids, thrips, whiteflies, loopers, worms, beetles, leaftollers, moths, weevils, and eggs thereof.
- 107. A pesticidal composition comprising, in admixture with an acceptable carrier, rosemary oil, wintergreen oil, mineral oil, lecithin and water, wherein the composition is pesticidally effective against fungus, bacteria, insects, arachnids, or larvae and eggs thereof.
- 108. The pesticidal composition of claim 107, wherein the composition is effective against mites, aphids, thrips, whiteflies, loopers, worms, beetles, leafrollers, moths, weevils, or eggs thereof.
- 110. A method for controlling agricultural invertebrate pests, including insects, arachnids, or larvae and eggs thereof, comprising applying to a locus where control is desired a pesticidally-effective amount of the composition of claim 107.
- 111. The method of claim 110, wherein the invertebrate pest is selected from the group consisting of mites, aphids, thrips, whiteflies, loopers, worms, beetles, leafrollers, moths, weevils, and eggs thereof.

Please add claims 112-139, as follow.

- 112. A pesticidal composition comprising, in admixture with an acceptable carrier, wintergreen oil, mineral oil, phenylethyl propionate and vanillin.
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 113. The pesticidal composition of claim 112, wherein the composition is effective against fungus, bacteria, insects, arachnids, or larvae and eggs thereof.

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- 114. The pesticidal composition of claim 113, wherein said wintergreen oil, mineral oil, phenylethyl propionate and vanillin are selected on a basis for pesticidal effectiveness against mites, aphids, thrips, whiteflies, loopers, worms, beetles, leafrollers, moths, weevils, or eggs thereof.
- 115. A method for controlling invertebrate pests, including insects, arachnids, or larvae and eggs thereof, comprising applying to a locus where control is desired a pesticidally-effective amount of the composition of claim 112.
- 116. The method of claim 115, wherein the invertebrate pest is selected from the group consisting of mites, aphids, thrips, whiteflies, loopers, worms, beetles, leafrollers, moths, weevils and eggs thereof.
- 117. A pesticidal composition comprising, in admixture with an acceptable carrier, wintergreen oil, mineral oil, phenylethyl propionate, vanillin and cinnamon oil.
- 118. The pesticidal composition of claim 117, wherein the composition is pesticidally effective against fungus, bacteria, insects, arachnids, or larvae and eggs thereof.
- 119. The pesticidal composition of claim 118, wherein wintergreen oil, mineral oil, phenylethyl propionate, vanillin and cinnamon oil are selected on a basis for pesticidal effectiveness against mites, aphids, thrips, whiteflies, loopers, worms, beetles, leafrollers, moths, weevils, or eggs thereof.
- 120. A method for controlling agricultural invertebrate pests, including insects, arachnids, or larvae and eggs thereof, comprising applying to a locus where control is desired a pesticidally-effective amount of the composition of claim 117.

- 121. The method of claim 120, wherein the invertebrate pest is selected from the group consisting of mites, aphids, thrips, whiteflies, loopers, worms, beetles, leafrollers, moths, weevils, and eggs thereof.
- 122. A pesticidal composition comprising, in admixture with an acceptable carrier, wintergreen oil and rosemary oil, wherein said wintergreen oil and rosemary oil are selected on a basis for pesticidal effectiveness against fungus, bacteria, insects, arachnids, or larvae and eggs thereof.
- 123. The pesticidal composition of claim 122, wherein the composition is effective against mites, aphids, lice, thrips, whiteflies, loopers, worms, beetles, leafrollers, moths, weevils, or eggs thereof.
- 124. A method for controlling agricultural invertebrate pests, including insects, arachnids, or larvae and eggs thereof, comprising applying to a locus where control is desired a pesticidally-effective amount of the composition of claim 122.
- 125. The method of claim 124, wherein the invertebrate pest is selected from the group consisting of mites, aphids, lice, thrips, whiteflies, loopers, worms, beetles, leafrollers, moths, weevils, and eggs thereof.
- 126. A pesticidal composition comprising, in admixture with an acceptable carrier, wintergreen oil and rosemary oil, wherein said wintergreen oil and rosemary oil are selected on a basis for pesticidal effectiveness against lice.
- 127. A method for controlling lice, comprising applying to a locus where control is desired a pesticidally-effective amount of the composition of claim 126.
- 128. A pesticidal composition comprising, in admixture with an acceptable carrier, wintergreen oil and phenylethyl propionate, wherein said wintergreen oil and phenylethyl

propionate are selected on a basis for pesticidal effectiveness against fungus, bacteria, insects, arachnids, or larvae and eggs thereof.

- 129. The pesticidal composition of claim 128, wherein the composition is effective against mites, lice, aphids, thrips, whiteflies, loopers, worms, beetles, leafrollers, moths, weevils or eggs thereof.
- 130. A method for controlling agricultural invertebrate pests, including insects, arachnids, or larvae and eggs thereof, comprising applying to a locus where control is desired a pesticidally-effective amount of the composition of claim 128.
- 131. The method of claim 130, wherein the invertebrate pest is selected from the group consisting of mites, lice, aphids, thrips, whiteflies, loopers, worms, beetles, leafrollers, moths, weevils, and eggs thereof.
- 132. A pesticidal composition comprising, in admixture with an acceptable carrier, wintergreen oil and phenylethyl propionate, wherein said wintergreen oil and phenylethyl propionate are selected on a basis for pesticidal effectiveness against lice.
- 133. A method for controlling lice, comprising applying to a locus where control is desired a pesticidally-effective amount of the composition of claim 132.
- 134. A pesticidal composition comprising, in admixture with an acceptable carrier, rosemary oil and benzyl alcohol, wherein said rosemary and benzyl alcohol are selected on a basis for pesticidal effectiveness against fungus, bacteria, insects, arachnids, or larvae and eggs thereof.
- 135. The pesticidal composition of claim 134, wherein the composition is effective against mites, aphids, lice, thrips, whiteflies, loopers, worms, beetles, leafrollers, moths, weevils, or eggs thereof.